

Engaging Students to Maximize Learning

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In order to create the optimal learning environment for student achievement, we will look at how the combination of engaging qualities, high order thinking levels and the highly effective teaching strategies can be utilized in the classroom. The focus will be on the top two most effective strategies; identifying similarities and differences and summarizing and note taking.

First, we will review the brain rules to better understand how the brain works and learns. Then teachers will have an opportunity to practice what they are learning and see how to apply the skills in different subject areas as well as varying student levels. We will use thinking maps to as one of the example sets for helping students understand and store information.

Brain Rules by John Medina

- 1.Exercise improves thinking skills
2. Human beings use symbolic reasoning
- 3.Every brain is wired differently
- 4.People do not pay attention to boring things.
- 5.Repeat to remember.
- 6.Remember to repeat.
7. Sleep well, think well.
- 8.Stressed brains do not learn, the same way as non-stressed brains.
- 9.Stimulate more of the senses at the same time.
- 10.Vision trumps all other senses.
- 11.Male and female brains are different.
- 12.We are powerful and natural explorers.

ENGAGING QUALITIES

- **Personal Response:** “More than one right answer”
- **Clear/Modeled Expectations:** “Students know what success looks like”

- **Emotional/ Intellectual Safety:** “Students feel free to take risks”
- **Learning with Others:** “Learning has a social component.”
- **Sense of Audience:** “Student work is shared.”
- **Choice:** “Students have meaningful options.”
- **Novelty and Variety:** “Learning experiences are unusual and unexpected.”
- **Authenticity:** “Teacher makes connections to students’ experiences and/or prior learning. (Antonneti and Garver)

THINKING LEVELS

- Application: using patterns
- Analysis: Finding patterns
- Evaluation: Comparing patterns
- Synthesis: Creating new patterns

HIGHLY EFFECTIVE TEACHING STRATEGIES

- Identifying similarities and differences (45 percentile gain in student achievement)
- Summarizing and note taking (34%)
- Reinforcing effort (29%)
- Homework and practice (28%)
- Nonlinguistic representations (27%)
- Cooperative Learning (27%)
- Setting Objectives and Feedback (23%)
- Generating/Testing Hypothesis (23%)
- Questions/Cues/Advance Organizers (22%)

(Marzano, R. Pickering, D.Pollock, 2001)